

STANLEY M. BESEN — Vice President

B.B.A. Economics, City College of New York
M.A. Economics, Yale University
Ph.D. Economics, Yale University

Dr. Besen is a Vice President in CRA's Economic Litigation Program.

PROFESSIONAL EXPERIENCE

1992–present	Vice President, Charles River Associates, Washington, D.C.
1980–1992	Senior Economist, The Rand Corporation, Washington, D.C.
1990–1991	Visiting Professor of Law and Economics, Georgetown University Law Center
1988–1989	Visiting Henley Professor of Law and Business, Columbia University
1985–1988	Co-editor, <i>Rand Journal of Economics</i>
1978–1980	Co-director, Network Inquiry Special Staff, Federal Communications Commission
1971–1972	Brookings Economic Policy Fellow, Office of Telecommunications Policy, Executive Office of the President
1965–1980	Assistant Professor, Associate Professor, Professor of Economics, Allyn R. and Gladys M. Cline Professor of Economics and Finance, Rice University
1963–1965	Economist, Institute for Defense Analyses
1962–1963	Acting Assistant Professor of Economics, University of California, Santa Barbara

CONSULTANCIES

1972–1978	The Rand Corporation
1972–1977	Office of Telecommunications Policy, Executive Office of the President
1975	Texoma Regional Planning Commission
1967	Department of Defense

PROFESSIONAL ACTIVITIES/HONORS

Member, U.S. National Committee on Data for Science and Technology (CODATA), National Research Council, 1993–present.

Member, Board of Editors, *Information Economics and Policy*, 1993–present.



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Member, Advisory Board, Information Infrastructure Project, Science, Technology, and Public Policy Program, John F. Kennedy School of Government, Harvard University, 1991–present.

Member, Editorial Board, *Economics of Innovation and New Technology*, 1989–present.

Member, Office of Technology Assessment Advisory Panel on Communications Systems for an Information Age, 1986–1988.

Member, Regional Telecommunications Planning Advisory Committee, City of Cincinnati, 1985.

Member, Office of Technology Assessment Advisory Panel on Intellectual Property Rights in an Age of Electronics and Information, 1984–1985.

Expert, World Intellectual Property Organization/UNESCO Meeting on Unauthorized Private Copying of Recordings, Broadcasts, and Printed Matter, 1984.

Listed in *Who's Who in America*, 1982–1983, 1984–1985, 1986–1987, 1988–1989, 1990–1991, 1992–1993.

Member, Editorial Board, *Southern Economic Journal*, 1979–1981.

Member, Task Force on National Telecommunications Policy Making, Aspen Institute Program on Communications and Society, 1977.

Brookings Economic Policy Fellow, 1971–1972.

Member, Technical Advisory Committee on Business Development, Model City Program, City of Houston, 1969–1971.

Wilson University Fellow, 1959–1961.

Overbrook Fellow, 1958–1959.

Beta Gamma Sigma, 1958.



PUBLICATIONS

Books and Reports

Telecommunications and Information Technology Standardization in Japan: A Preliminary Survey. The Rand Corporation, N-3204-CUSJR, 1991.

Compensating Creators of Intellectual Property: Collectives that Collect. With S.N. Kirby. The Rand Corporation, R-3751-MF, May 1989.

New Technologies and Intellectual Property: An Economic Analysis. The Rand Corporation, N-2601-NSF, May 1987.

Compatibility Standards, Competition, and Innovation in the Broadcasting Industry. With L.L. Johnson. The Rand Corporation, R-3453-NSF, November 1986.

The Economics of Bulk Power Exchanges. With J.P. Acton. The Rand Corporation, N-2277-DOE, May 1985.

Misregulating Television: Network Dominance and the FCC. With T.G. Krattenmaker, A.R. Metzger, and J.R. Woodbury. Chicago: University of Chicago Press, 1984.

An Analysis of the Federal Communication Commission's Group Ownership Rules. With L.L. Johnson. The Rand Corporation, N-2097-MF, January 1984.

Regulation of Media Ownership by the Federal Communications Commission: An Assessment. With L.L. Johnson. The Rand Corporation, R-3206-MF, December 1984.

Issues in the Design of a Market Experiment for Bulk Electrical Power. With J.P. Action. The Rand Corporation, N-2029-DOE, December 1983.

An Economic Analysis of Mandatory Leased Channel Access for Cable Television. With L.L. Johnson. The Rand Corporation, R-2989-MF, December 1982.

After Energy Price Decontrol: The Role of Government Conservation Programs. With L.L. Johnson. The Rand Corporation, N-1903-DOE, October 1982.

New Television Networks: Entry, Jurisdiction, Ownership, and Regulation. With T.G. Krattenmaker et al. Final Report, Network Inquiry Special Staff, Federal Communications Commission, 1980.



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Economic Policy Research on Cable Television: Assessing the Costs and Benefits of Cable Deregulation. With others. Prepared for the Office of Telecommunications Policy, Executive Office of the President, December 1976. Reprinted in *Deregulation of Cable Television*, edited by Paul W. MacAvoy. American Enterprise Institute, 1977.

On Measuring the Gain in Economic Welfare from Marginal Cost Pricing When a Related Market Is of Importance: The Case of Electricity and Natural Gas. With B.M. Mitchell. The Rand Corporation, P-5755, February 1977.

"A Simultaneous Equations Model of Television Station Revenue and Expenditure." Appendix F to R.E. Park, L.L. Johnson, and B. Fishman, *Projecting the Growth of Television Broadcasting: Implications for Spectrum Use*, The Rand Corporation, R-1841-FCC, February 1976.

Introduction to Monetary Economics. Harper and Row, 1975.

An Economic Evaluation of an Alternative Method of Funding Public Broadcasting. Broadcasting Institute of North America, 1973.

Evaluating the Returns to Regional Economic Development Programs. Institute for Defense Analyses, B-272, 1966.

Internal Prices as an Administrative Tool: An Application to the Military Air Transport Service. With M.J. Bailey, J.G. Cross, and W.P. Sewell. Institute for Defense Analyses, S-200, 1965.

Articles and Book Chapters

"Choosing How to Compete: Strategies and Tactics in Standardization." With J. Farrell. *Journal of Economic Perspectives*, forthcoming.

"AM v. FM: The Battle of the Bands." *Industrial and Corporate Change* (1992).

"An Economic Analysis of Copyright Collectives." With S.N. Kirby and S.C. Salop. *Virginia Law Review* (1992).

"The Role of the ITU in Telecommunications Standardization: Pre-Eminence, Impotence, or Rubber Stamp?" With J. Farrell. *Telecommunications Policy* (1991). Reprinted as The Rand Corporation, RP-100, 1992.

"An Introduction to the Law and Economics of Intellectual Property." With L.J. Raskind. *Journal of Economic Perspectives* (1991).



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"The European Telecommunications Standards Institute: A Preliminary Analysis." *Telecommunications Policy* (1990). Reprinted as The Rand Corporation, N-3320-NSF, 1991.

"Separate Satellite Systems and INTELSAT: An American View." *Revue de Droit de l'Informatique et des Telecoms* (1989).

"The Economics of Telecommunications Standards." With G. Saloner. In *Changing the Rules: Technological Change, International Competition, and Regulation in Communications*, edited by R.W. Crandall and K. Flamm. Brookings Institute, 1989.

"Private Copying, Appropriability, and Optimal Copying Royalties." With S.N. Kirby. *Journal of Law and Economics* (October 1989). An earlier version appeared as The Rand Corporation, R-3546-NSF, October 1987.

"Assessing the Effects of Bulk Power Rate Regulation: Results from a Market Experiment." With J.P. Acton. *Applied Economics* (May 1987). Reprinted in *Competition in Electricity: New Markets and New Structures*, edited by J. Plummer and S. Troopman, Public Utilities Reports and QED Research, 1990. An earlier and more extended version appeared as *Regulation, Efficiency, and Competition in the Exchange of Electricity: First-Year Results from the FERC Bulk Power Market Experiment*, The Rand Corporation, R-3301-DOE, October 1985.

"Discussion of Michael A. Tyler, 'The Extent of Software Piracy.'" In *Protection of Computer Systems and Software*, edited by Frank L. Huband and R.D. Shelton. Clifton, NJ: Law & Business, Inc., 1986.

"Private Copying, Reproduction Costs, and the Supply of Intellectual Property." *Information Economics and Policy* (1986). An earlier version appeared as The Rand Corporation, N-2207-NSF, December 1984.

"Copying Costs and the Costs of Copying." In *Electronic Publishing Plus: Media for a Technological Future*, edited by M. Greenberger. Knowledge Industries, 1985.

"Regulation of Broadcast Station Ownership: Evidence and Theory." With L.L. Johnson. In *Video Media Competition: Regulation, Economics, and Technology*, edited by E.M. Noam. Columbia University Press, 1985.

"The Regulation of Telecommunications Networks." *Information Society* (1984).

"The Determinants of Network Television Program Prices: Implicit Contracts, Regulation, and Bargaining Power." With J.R. Woodbury and G.M. Fournier. *The Bell Journal of Economics* (Autumn 1983).



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“Regulation, Deregulation, and Antitrust in the Telecommunications Industry.” With J.R. Woodbury. *The Antitrust Bulletin* (Spring 1983).

Summary Comments in *Telecommunications Regulation Today and Tomorrow*, edited by E.M. Noam. Law & Business, Inc./Harcourt Brace Jovanovich, 1983.

“Economic Implications of Mandated Efficiency Standards for Household Appliances: Comment.” With L.L. Johnson. *The Energy Journal* (January 1982).

“Regulating Network Television: Dubious Premises and Doubtful Solutions.” With T.G. Krattenmaker. *Regulation* (May/June 1981).

“Cable Copyright and Consumer Welfare: The Hidden Cost of the Compulsory License.” With H.M. Shooshan, C.L. Jackson, and J. Wilson. Shooshan and Jackson, May 1981.

“The Deregulation of Cable Television.” With R.W. Crandall. *Law and Contemporary Problems* (Winter 1981).

“An Analysis of the Network-Affiliate Relationship in Television.” With S.A. Preskill. Network Inquiry Special Staff, Federal Communications Commission, 1980.

“The Value of Television Time: Some Problems and Attempted Solutions: Reply.” *Southern Economic Journal* (April 1978).

“Copyright Liability for Cable Television: Compulsory Licensing and the Coase Theorem.” With W.G. Manning and B.M. Mitchell. *Journal of Law and Economics* (April 1978). An earlier version appeared as *Copyright Liability for Cable Television: Is Compulsory Licensing the Solution?*, The Rand Corporation, R-2023-MF, February 1977.

“Deregulating Telecommunications — Sorting Out Mixed Signals.” *Regulation* (March/April 1978).

“The Value of Television Time.” *Southern Economic Journal* (January 1976). An earlier version appeared as *The Value of Television Time and the Prospects for New Stations*, The Rand Corporation, R-1328-MF, October 1973.

“Watergate and Television: An Economic Analysis.” *Communications Research* (July 1976). An earlier version appeared as The Rand Corporation, R-1712-MF, May 1975.

“Market Size, VHF Allocations, and the Viability of Television Stations.” With P.J. Hanley. *Journal of Industrial Economics* (September 1975).



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“The Economics of the Network-Affiliate Relationship: Reply.” With R. Soligo. *American Economic Review* (December 1975).

“The Economics of the Cable Television ‘Consensus.’” *Journal of Law and Economics* (April 1974).

“Education and Productivity in United States Manufacturing: Some Cross-Section Evidence.” *Journal of Political Economy* (May/June 1973).

“The Economics of the Network-Affiliate Relationship in the Television Broadcasting Industry.” With R. Soligo. *American Economic Review* (June 1973).

“Elasticities of Substitution and Returns to Scale in United States Manufacturing: Some Additional Evidence.” *Southern Economic Journal* (October 1967).

“Cost Effectiveness Analysis for the ‘War on Poverty.’” With A.E. Fechter and A.C. Fisher. In *Cost-Effectiveness Analysis: New Approaches in Decision-Making*, edited by T.A. Goldman. New York: Praeger, 1967.

“An Empirical Analysis of Commercial Bank Lending Behavior.” *Yale Economic Essays* (Fall 1965).

CONGRESSIONAL TESTIMONY

Witness, Subcommittee on Intellectual Property and Judicial Administration, Committee on the Judiciary, U.S. House of Representatives, 1991. Prepared statement and testimony appear in *Intellectual Property and International Issues*, 102nd Congress, 1st Session.

Witness, Subcommittee on Telecommunications and Finance, Committee on Energy and Commerce, U.S. House of Representatives, 1990. Prepared statement and testimony appear in *Cable Television Regulation (Part 2)*, 101st Congress, 2nd Session.

Witness, Subcommittee on Telecommunications, Consumer Protection, and Finance, Committee on Energy and Commerce, U.S. House of Representatives, 1983. Prepared statement and testimony appear in *Options for Cable Legislation*, 98th Congress, 1st Session.

Witness, Subcommittee on Communications, Committee on Commerce, Science, and Transportation, U.S. Senate, 1982. Prepared statement and testimony appear in *Cable Television Regulation*, 97th Congress, 2nd Session.



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Witness, Subcommittee on Telecommunications, Consumer Protection, and Finance, Committee on Energy and Commerce, U.S. House of Representatives, 1981. Prepared statement and testimony appear in *Status of Competition and Deregulation in the Telecommunications Industry*, 97th Congress, 1st Session.

Witness, Subcommittee on General Oversight and Minority Enterprise, Committee on Small Business, U.S. House of Representatives, 1980. Prepared statement and testimony appear in *Media Concentration (Part 1)*, 96th Congress, 2nd Session.

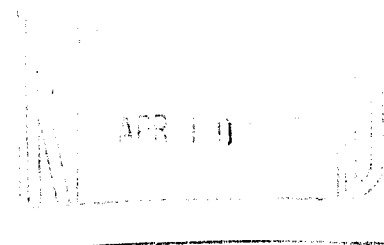
Witness, Subcommittee on Communications, Committee on Commerce, Science, and Transportation, U.S. Senate, 1977. Prepared statement and testimony appear in *Cable Television*, 95th Congress, 1st Session.

Witness, Subcommittee on Communications, Committee on Interstate and Foreign Commerce, U.S. House of Representatives, 1976. Prepared statement and testimony appear in *Cable Television Regulation Oversight (Part 1)*, 94th Congress, 2nd Session.



JOHN M. GALE — Senior Associate

Ph.D. candidate Economics, University of Wisconsin–Madison
M.S. Economics, University of Wisconsin–Madison
B.S. Beloit College



John Gale specializes in industrial organization and microeconomic theory. His research includes price-war modeling and the application of game theoretic models to qualitative aspects of specific markets. His research also includes work on atmospheric modeling and applied optics.

PROFESSIONAL EXPERIENCE

University of Wisconsin, Madison, WI

Teaching Assistant, Principles of Microeconomics, Intermediate Microeconomics, Contemporary Economic Issues, Introductory Physics.

Research Assistant to Larry Samuelson, Fall 1992 – Spring 1993.

OptiMetrics Inc., Las Cruces, NM

Staff Scientist, Spring 1985 – Fall 1989.

PUBLICATIONS

“Price Wars as Signals in Repeated Games.” Ph.D. dissertation, University of Wisconsin, 1995.

“Learning to be Imperfect: The Ultimatum Game.” With K. Binmore and L. Samuelson. *Games and Economic Behavior*, forthcoming.

“Directed Energy Warfare: Advances in Protective Armor Materials.” With J. Perkins, P. Yip, C. Pergantis, J. Walkinshaw, and R. Brewer. Proceedings of the 1990 Army Science Conference, Durham, NC, 1990.

AWARDS

Excellent Teaching Rating, University of Wisconsin–Madison
Palmer Fellowship in Teaching, Beloit College



CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing **COMMENTS OF SPRINT** was delivered hand on this the 11th day of April, 1995, to the below-listed parties:

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Commissioner Susan Ness
Federal Communications
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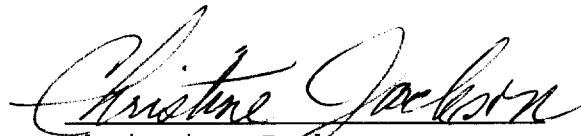
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Christine Jackson

April 11, 1995